REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on 3/27/2006 and is being filed pursuant to a Request for Continued Examination (RCE) as provided under 37 CFR 1.114. Reconsideration of the present application is respectfully requested. Claims 1, 5, 6, 11, 12, 17, 18, 23 and 24 have been amended. Claim 25 has been previously canceled. No claims have been added. No new matter has been added.

Claim Rejections

Independent claims 1, 5, 6, 11, 12, 17, 18, 23 and 24 stand rejected under 35 U.S.C. § 103(a) based on Lewis (U.S. Patent no. 6,378,066). Applicant respectfully traverses the rejections.

The present invention generally relates to a method for scheduling tasks in a multiprocessor system and providing parallel or concurrent execution of those tasks while implicitly synchronizing access to resources used by that system. In one embodiment of the present invention, scheduling domains are used for scheduling tasks. At least one scheduling domain is associated with at least two tasks and a resource, such as a data structure, shared by the at least two tasks. Implicit synchronization is achieved by prohibiting tasks associated with one scheduling domain from running in parallel or concurrently. With the above remarks in mind, attention is directed to independent claim 1 of the present invention.

Claim 1 recites:

> 1. A computer implemented method including
>   scheduling tasks from a set thereof for running on a plurality of processors, each processor having access to a shared resource, wherein each task of the set of tasks is

associated with one of a plurality of scheduling domains, **at least one scheduling domain being associated with at least two tasks of the set of tasks and a resource shared by the at least two tasks, and wherein tasks within each scheduling domain can be run on different processors but are prohibited from running concurrently even if run on different processors**; and

allowing a plurality of tasks of the set of tasks to run concurrently in different scheduling domains.

(Emphasis added).

By contrast, Lewis does not teach or suggest the above emphasized claim limitation. Lewis discloses a method of solving data dependency problems among a number of tasks. As discussed in Lewis's abstract, lines 50-57 of column 5, and line 66 of column 5 though line 3 of column 36, Lewis discloses dividing a memory region into a number of blocks, each block storing data needed for solving a problem. For each block, a program code is specified to be executed on the values within the block. Dependencies among the blocks are specified for scheduling the processing order of these blocks. If a first block is dependent on a second block, the second block must be processed before the first block may be processed. For example, assume block 1 is associated with code 1, block 2 is associated with code 2 and block 1 is dependent on block 2. Then, according to Lewis' disclosure, block 2 is processed by code 2 before block 1 may be processed by code 1. Lewis, however, does not teach or suggest a method solving the problem of synchronizing two tasks sharing a same resource, much less teaching or suggesting <u>a scheduling domain associated with at least two tasks and a resource shared by the at least two tasks</u> for implicitly synchronizing the at least two tasks with respect to the shared resource.

Thus, at least for the foregoing reasons, Lewis does not teach or suggest each and every limitation of claim 1. Therefore, claim 1 is not rendered obvious in view of Lewis. Claim 1 and all claims which depend on it are patentable over Lewis.
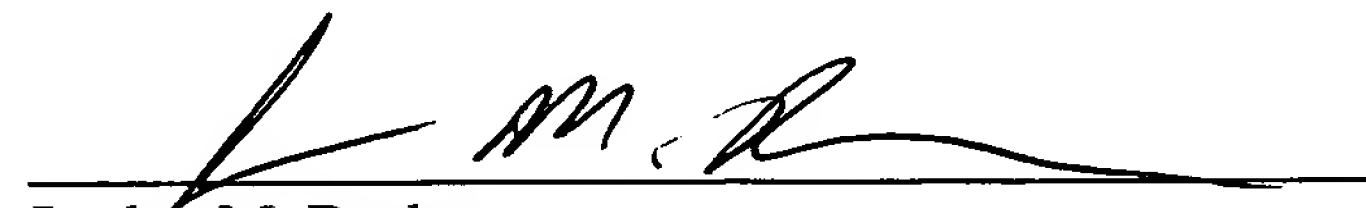
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All other independent claims each recite essentially similar limitation as discussed above for claim 1. Thus, these other independent claims and all claims which depend on them are also patentable over Lewis.

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If any additional fee is required, please charge Deposit Account No. 02-2666.

Respectfully submitted,
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